IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Attorney Docket No. 15970US01

In the Application of:	
Martin Morris	
U.S. Serial No.: 09/945,200	
Filed: August 30, 2001	
For: METHOD AND APPARATUS FOR RANGE EXTENSION OF LOW-POWER WIRELESS COMMUNICATION LINKS	
Examiner: Kevin Michael Burd	
Group Art Unit: 2631	
Confirmation No.: 4498	

AMENDED APPEAL BRIEF UNDER 37 C.F.R. § 41.37(d)

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This paper is a timely filed amended appeal brief in response to the Notification of Non-Compliant Appeal Brief of July 24, 2006.

REAL PARTY IN INTEREST

Broadcom Corporation, a corporation organized under the laws of the state of California and having a place of business at 16215 Alton Parkway, Irvine, California 92618, has acquired the entire right, title and interest in and to the invention, the application, and any and all patents to be obtained therefor.

RELATED APPEALS AND INTERFERENCES

There are currently no appeals or interferences pending regarding related applications.

STATUS OF THE CLAIMS

Claims 1-6, 8-15, 17-21 and 24-33 are pending in the present application. Claims 1-6, 8-15, 17-21 and 24-33 are rejected. The rejection of claims 1-6, 8-15, 17-21 and 24-33 is being appealed.

STATUS OF AMENDMENTS

No amendments are pending in the present application.

SUMMARY OF CLAIMED SUBJECT MATTER

Some embodiments according to some aspects of the present invention may provide, for example, a wireless communications device (e.g., device 110) that receives and sends incoming and outgoing transmissions in which the transmissions include digitally-encoded data and error-correcting coding for the digitally-encoded data as set forth, for example, in claim 1. See, e.g., device 110; FIG. 2; and specification at page 5, lines 4-8. The wireless communications device (e.g., device 110) may include, for example, a receiver (e.g., receiver 220), a transmitter (e.g., transmitter 210) and an error-correcting coding mechanism (e.g., error-correcting coding mechanism 240). See also

FIG. 2. The receiver (e.g., receiver 220) may be operable to receive the incoming transmissions. The transmitter (e.g., transmitter 210) may be operable to send the outgoing transmissions over a first transmission range. See, e.g., specification at page 4, lines 23-26. The error-correcting coding mechanism (e.g., error-correcting coding mechanism 240) may be operable to vary a level of the error-correcting coding applied to the digitally-encoded data within the outgoing transmissions, such that the first transmission range is effectively increased up to a maximum transmission range corresponding to a maximum level of error-correcting coding. See, e.g., specification at page 5, lines 5-8 and lines 22-27. The access code portion (e.g., dedicated inquiry access code 340) of outgoing transmissions sent by the wireless communications device (e.g., device 110) may be reserved to notify a second wireless communications device (e.g., device 120) that the outgoing transmissions have an increased level of error-correcting coding. See, e.g., specification at page 7, lines 4-13.

Some embodiments according to some aspects of the present invention may provide, for example, a method (e.g., flowchart 500; and FIG. 5) that sends a transmission from a wireless device as set forth, for example, in claim 12. The method (e.g., flowchart 500) may include, for example, one or more of the following: detecting that a recipient device is outside of a transmission range of the wireless device (e.g., query 510); encoding digital data to be transmitted using enhanced error-correcting coding beyond a standard level of error-correcting coding (e.g., step 535); notifying the recipient device that following data will contain enhanced error-correcting coding, said notifying comprising reserving an access code portion (e.g., access code 340) of the transmission for the notification of enhanced error-correcting coding (e.g., step 520); and sending the encoded digital data (e.g., step 535).

Some embodiments according to some aspects of the present invention may provide, for example, an article of manufacture, which includes a computer readable medium having stored therein a computer program (e.g., flowchart 500; and FIG. 5) carrying out a method for sending a transmission from a wireless device (e.g., device 110) as set forth, for example, in claim 21. The computer program (e.g., flowchart 500)

may include, for example, a first code segment (e.g., step 535) and a second code segment (e.g., step 520). The first code segment may encode, in response to an indication that a recipient device has been detected to be outside of a transmission range of the wireless device (e.g., query 510), a message using enhanced error-correcting coding beyond a predefined standard level of encoding (e.g., step 535), to thereby effectively increase the transmission range of the wireless device (e.g., device 110). See, e.g., specification at page 5, lines 4-8. The second code segment may generate a notification for transmission to the recipient device that the message will contain enhanced error-correcting coding. See, e.g., step 520; and specification at page 7, lines 4-13. The message may be a data packet that includes, for example, an access code portion, a header portion and a payload portion. See, e.g., FIGS. 3A and 3B. The dedicated inquiry access code portion (e.g., dedicated inquiry access code 340) may be appended to a beginning portion of the access code portion. See, e.g., FIG. 3B.

Some embodiments according to some aspects of the present invention may provide, for example, a method (e.g., flowchart 500; and FIG. 5) that extends a transmission range of a wireless device as set forth, for example, in claim 27. The method (e.g., flowchart 500) may include, for example, one or more of the following: encoding data using a first error correction code when the wireless device is within a first transmission range of a recipient device (e.g., step 515); detecting that the wireless device is outside said first transmission range (e.g., query 510); and encoding messages using a second error correction code when the wireless device is outside said first transmission range (e.g., step 535). A dedicated inquiry access code portion (e.g., dedicated inquiry access code 340) of transmitted data may be reserved to identify the recipient device and notify the recipient device (e.g., device 120) of the second error correction code when it is utilized by the wireless device (e.g., device 110). See, e.g., specification at page 7, lines 4-13.

Some embodiments according to some aspects of the present invention may provide, for example, a wireless communications system as set forth, for example, in claim 30. The wireless communications system (see, e.g., FIGS. 1A and 1B) may

include, for example, a first wireless device (e.g., device 110) and a second wireless device (e.g., device 120). The first wireless device (e.g., device 110) may have a first transmission range (see, e.g., specification at page 4, lines 23-26) and a first error-correcting coding means (e.g., error-correcting coding mechanism 240). The second wireless device (e.g., device 12) may have a second transmission range (see, e.g., specification at page 4, lines 23-26). When the first wireless device (e.g., device 110) moves outside of the first transmission range relative to the second wireless device (e.g., device 120), the first error-correcting coding means (e.g., error-correcting coding mechanism 240) may increase the first transmission range by increasing the level of error-correcting coding applied to transmissions sent from the first wireless device (e.g., device 110) to the second wireless device (e.g., device 120). A dedicated inquiry access code portion (e.g., dedicated inquiry access code 340) of transmitted data may be reserved to identify the second wireless device (e.g., device 120) and notify the second wireless device (e.g., device 120) of the second error correction code when it is utilized by the first wireless device (e.g., device 110). See, e.g., specification at page 7, lines 4-13.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-6, 8-15, 17-21 and 24-33 are unpatentable under 35 U.S.C. § 103(a) as being obvious over United States Patent Publication No. 2002/0187799 A1 to Jacobus Haartsen ("Haartsen") in view of United States Patent Publication No. 2002/0034172 A1 to Jin-Meng Ho ("Ho") and further in view of the application's allegedly disclosed prior art.

ARGUMENT

Claims 1-6, 8-15, 17-21 and 24-33 stand rejected under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent Publication No. 2002/0187799 A1 ("Haartsen") in view of U.S. Patent Publication No. 2002/0034172 A1 ("Ho") and further in view of the

application's allegedly disclosed prior art. Appellant respectfully requests that the rejection be reversed by the Board for at least the reasons as set forth below.

<p style="text-align:center">Claims 1-6 and 8-11</p>

Claim 1 recites, in part, wherein an access code portion of outgoing transmissions sent by the wireless communications device is reserved to notify a second wireless communications device that the outgoing transmissions have an increased level of error-correcting coding.

Ho teaches away from an access code portion being reserved to notify a second wireless communications device that the outgoing transmissions have an increased level of error-correcting coding. For example, Ho specifically teaches that "[t]he Access Code field 102 is used for synchronization and DC offset compensation". Ho at paragraph [0020]. Thus Ho teaches away from the use of the access code portion as set forth in claim 1. In addition, Ho specifically teaches in Figures 1A and 1B that the Access Code field 102 is separate and different from the PHY header 104 which carries an FEC field 114. Thus, the forward error correcting field 114 is taught to be part of the PHY header 104 and teaches away from the forward error correcting field 114 being part of the Access Code field 102.

Furthermore, Haartsen teaches away from notifying a second wireless communications device that the outgoing transmissions have an increased level of error-correcting coding. Haartsen at paragraph [0017] states that the performance parameter of the communication channel is measured at the second wireless communications device. Thus, there is no need to notify the second wireless communications device since the second wireless communications device is the first to know about, for example, the performance parameter of the communication channel.

The application's allegedly disclosed prior art also teaches away from an access code portion being reserved to notify a second wireless communications device that the outgoing transmissions have an increased level of error-correcting coding. The Office Action cites the present application at paragraph [1027] which includes statements such as "[a]ccording to the Bluetooth specification". However, the Bluetooth specification

teaches away from an access code portion being reserved to notify a second wireless communications device that the outgoing transmission have an increased level of error-correcting coding. Appellant respectfully submits that the Bluetooth specification teaches an access code portion without notification of an increased level of error-correcting coding.

Appellant respectfully submits that Haartsen, Ho and the application's allegedly disclosed prior art teach away from the claimed invention as set forth in claim 1. Teaching away from the claimed invention is a "significant factor" in determining obviousness according to M.P.E.P. § 2145(X)(D)(1). See, e.g., M.P.E.P. § 21245(X)(D)(1)("[a] prior art reference that 'teaches away' from the claimed invention is a significant factor to be considered in determining obviousness").

Appellant respectfully submits that, if the application's allegedly disclosed prior art teaches a DIAC containing an FEC value (as alleged in the Office Action and disputed by Appellant), then Haartsen and Ho teach away from the application's allegedly disclosed prior art for the reasons stated above. It is respectfully submitted that Haartsen and Ho cannot be combined with application's allegedly disclosed prior art since they teach away from each other. See, e.g., M.P.E.P. § 2145(X)(D)(2) ("[i]t is improper to combine references where the references teach away from their combination").

Appellant respectfully submits that Ho and the application's allegedly disclosed prior art are allegedly modifying Haartsen so that a second wireless device can be notified of an increased level of error-correcting coding. However, such efforts are not necessary in Haartsen, since Haartsen teaches, for example, that the performance parameter of the communication channel is measured at the second wireless communications device. Thus, there is no need to notify the second wireless communications device since the second wireless communications device is the first to know about, for example, the performance parameter of the communication channel.

Appellant respectfully submits that just because DIACs tolerate a higher bit error rate than a body of a message does not suggest reserving an access portion to notify a second wireless communications device that the outgoing transmissions have an

increased level of error-correcting coding. Appellant respectfully submits that, without impermissible hindsight of the claimed invention, one of ordinary skill in the art would have continued to place FEC information in the PHY header (which is not part of the body of the message) as taught in Ho (which presumably is a tangible example of the knowledge of one of ordinary skill in the art) and not in an access code portion as alleged in the Office Action. See, e.g., M.P.E.P. §§ 2111, 2111.01(II) and 2106(II)(C) with regard to interpreting claims from the perspective of one of ordinary skill in the art.

Furthermore, Appellant respectfully submits that there is no teaching in any of the cited documents of *reserving* an access portion to notify of an *increased* level of error-correcting coding. It is therefore respectfully submitted that a *prima facie* case of obviousness has not been presented.

For at least the above reasons, the obviousness rejection cannot be maintained. It is therefore respectfully requested that the obviousness rejection be reversed with respect to claim 1 and it dependent claims (i.e., claims 2-6 and 8-11).

Addressing Further Arguments by the Examiner

In the Office Action Made Final of December 2, 2005 and the Advisory Action of February 14, 2006, the Examiner did not directly address many of the issues raised previously and presently by Appellant.

Furthermore, the Examiner relied heavily on M.P.E.P. § 2141.02 (VI).

Reproduced, as a courtesy to the Board, is M.P.E.P. § 2141.02 (VI) in relevant part:

> >However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." *In re Fulton*, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).<

M.P.E.P. § 2141.02 (VI) at page 2100-132.

It is respectfully submitted that the above-cited text has been taken out of context by the Examiner. Appellant respectfully draws the attention of the Board to the title of same section, namely, section VI of M.P.E.P. § 2141.02 which is "PRIOR ART MUST

BE CONSIDERED IN ITS ENTIRETY, INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE CLAIMS". Respectfully, this is precisely the point that Appellant previously and presently makes. In fact, M.P.E.P. § 2145(X)(D)(1) is in line with M.P.E.P. § 2141.02 (VI) and with Appellant's point of view by viewing the documents cited by the Examiner in their entirety including those aspects that "teaching away" from the "claimed invention" since those aspects constitute a "significant factor to be considered in determining obviousness". M.P.E.P. § 2145(X)(D)(1) at page 2100-169.

In addition, Appellant respectfully draws the attention of the Board to the very first sentence of the first paragraph of section VI of M.P.E.P. § 2141.02 which states that "[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention". M.P.E.P. § 2141.02 at page 2100-132 (underlining in original). Again, this is inline with Appellants' arguments and evidence.

Thus, according to the cited section of M.P.E.P. § 2141.02, criticism, discrediting or discouragement carries additional weight in a teaching away argument.

It should be further noted that Haartsen teaches away from, for example, "an error-correcting coding mechanism operable to vary a level of the error-correcting coding applied to the digitally-encoded data within the outgoing transmissions, such that the first transmission range is effectively increased up to a maximum transmission range corresponding to a maximum level of error-correcting coding" as set forth in claim 1.

In the BACKGROUND section of Haartsen, Haartsen disparages changing the coding rate or modulation scheme because this may affect adversely affect the net user rate.

> Because uncoordinated radio systems are unable to control interference levels, the effectiveness of existing link adaptation techniques is limited in uncoordinated radio systems.... Link adaptation schemes based on changing the coding rate or changing the modulation scheme may be inadequate to address interference caused by the near-far problem. Also, existing link adaptation schemes may affect the net user rate. For example, the channel bandwidth in a GSM system is constant. Increasing the amount of

> FEC coding or implementing a more robust modulation scheme typically decreases the net user rate.

Haartsen at paragraph [0014], lines 6-24. Thus, Haartsen teaches away from "an error-correcting coding mechanism operable to vary a level of the error-correcting coding … such that the first transmission range is effectively increased up to a maximum transmission range corresponding to a maximum level of error-correcting coding" as set forth in claim 1. As Haartsen understands the problem, this type of error correcting would have an adverse affect on the net user rate.

Haartsen further states "there is a need for link adaptation techniques that attempt to maintain a substantially constant net user rate and bit-error-rate on the communication channel under changing signal and interference conditions". Haartsen at paragraph [0015], lines 4-8.

Thus, because Haartsen is very concerned with the adversely affecting the net user rate, Haartsen disparages or teaches away from "link adaptation schemes" such as "[i]ncreasing the amount of FEC coding or implementing a more robust modulation scheme" that "typically decreases the net user rate". Haartsen at paragraph [0014], lines 22-24.

In view of this sensitivity to maintaining "a substantially constant net user rate", (Haartsen at paragraph [0015], lines 5-6), Haartsen's teachings appear to be teaching away from effectively increasing a transmission range up to a maximum transmission range corresponding to a maximum level of error-correcting coding.

Such teaching away arguments, punctuated with specific and direct disparagement of the claimed invention, provide support for overcoming the Examiner's argument that the prior art's mere disclosure of more than one alternative does not constitute a teaching away.

Accordingly, Appellant again respectfully draws the attention of the Board to M.P.E.P. § 2145(X)(D)(1), namely, that "teaching away" from the "claimed invention" is a "significant factor to be considered in determining obviousness". M.P.E.P. at page 2100-169.

For at least the above reasons, the obviousness rejection cannot be maintained. It is therefore respectfully requested that the obviousness rejection be reversed with respect to claim 1 and it dependent claims (i.e., claims 2-6 and 8-11).

Claims 12-15 and 17-20

Claim 12 recites, in part, notifying the recipient device that following data will contain enhanced error-correcting coding, said notifying comprising reserving an access code portion of the transmission for the notification of enhanced error-correcting coding.

Appellant respectfully submits that many of the same or similar arguments made with respect to claim 1 can be made with respect to claim 12.

It is therefore respectfully requested that the obviousness rejection be reversed with respect to claim 12 and its dependent claims (i.e., claims 13-15 and 17-20).

Claims 21 and 24-26

Claim 21 recites, in part, a second code segment for generating a notification for transmission to the recipient device that the message will contain enhanced error-correcting coding, wherein the message is a data packet comprising an access code portion, a header portion and a payload portion, and wherein a dedicated inquiry access code portion is appended to a beginning portion of the access code portion.

Appellant respectfully submits that many of the same or similar arguments made with respect to claim 1 can be made with respect to claim 21.

In addition, Appellant respectfully submits that none of the cited documents, individually or combined, teaches *appending* to a *beginning* portion of an access code portion a dedicated inquiry access code as set forth in claim 21.

It is therefore respectfully requested that the obviousness rejection be reversed with respect to claim 21 and its dependent claims (i.e., claims 24-26).

Claims 27-29

Claim 27 recites, in part, wherein a dedicated inquiry access code portion of transmitted data is reserved to identify the recipient device and notify the recipient device of the second error correction code when it is utilized by the wireless device.

Appellant respectfully submits that many of the same or similar arguments made with respect to claim 1 can be made with respect to claim 27. It is therefore respectfully requested that the obviousness rejection be reversed with respect to claim 27 and its dependent claims (i.e., claims 28 and 29).

<u>Claims 30-33</u>

Claim 30 recites, in part, wherein a dedicated inquiry access code portion of transmitted data is reserved to identify the second wireless device and notify the second wireless device of the second error correction code when it is utilized by the first wireless device.

Appellant respectfully submits that many of the same or similar arguments made with respect to claim 1 can be made with respect to claim 30.

It is therefore respectfully requested that the obviousness rejection be reversed with respect to claim 30 and its dependent claims (i.e., claims 31-33).

Conclusion

For the foregoing reasons, claims 1-6, 8-15, 17-21 and 24-33 are patentable over the alleged prior art of record. Reversal of the Examiner's rejection of claims 1-6, 8-15, 17-21 and 24-33 and issuance of a patent on the application is therefore respectfully requested.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Account No. 13-0017.

Dated: <u>August 24, 2006</u>   Respectfully submitted,
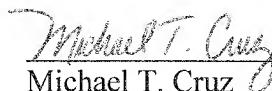
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CLAIMS APPENDIX

The following claims are involved in this appeal:

1.   A wireless communications device for receiving and sending incoming and outgoing transmissions, said transmissions including digitally-encoded data and error-correcting coding for the digitally-encoded data, comprising:

a receiver operable to receive the incoming transmissions;

a transmitter operable to send the outgoing transmissions over a first transmission range; and

an error-correcting coding mechanism operable to vary a level of the error-correcting coding applied to the digitally-encoded data within the outgoing transmissions, such that the first transmission range is effectively increased up to a maximum transmission range corresponding to a maximum level of error-correcting coding,

wherein an access code portion of outgoing transmissions sent by the wireless communications device is reserved to notify a second wireless communications device that the outgoing transmissions have an increased level of error-correcting coding.

2.   The wireless communications device of claim 1, wherein the error-correcting coding mechanism is additionally operable to decode varying levels of error-correcting coding applied to the incoming transmissions.

3.   The wireless communications device of claim 1, wherein a first portion of the outgoing transmissions contains information to notify the second wireless communications device that a remaining portion of the outgoing transmissions have an increased level of error-correcting coding.

4.   The wireless communications device of claim 3, wherein a first portion of the incoming transmissions contain information to notify the wireless communications

device that a remaining portion of the incoming transmission has an increased level of error-correcting coding.

5.   The wireless communications device of claim 1, wherein the error-correcting coding mechanism is activated when the receiver does not receive an anticipated incoming reply transmission from the second wireless communications device.

6.   The wireless communications device of claim 1, wherein the wireless communications device and the second wireless communications device implement the Bluetooth specification for transmitting and receiving data.

7.   (Cancelled)

8.   The wireless communications device of claim 1, wherein the reserved access code portion is a reserved dedicated inquiry access code.

9.   The wireless communications device of claim 8, wherein the digitally encoded data comprises a digitally-encoded data packet including an access code portion, a header portion and a payload portion.

10.   The wireless communications device of claim 9, wherein the error-correcting coding mechanism is activated when the second wireless communications device is outside the first transmission range, such that the data packet is re-encoded, prefixed with the reserved dedicated inquiry access code and re-sent with a pre-determined increase in error-correcting coding.

11.   The wireless communications device of claim 10, wherein the reserved dedicated inquiry access code contains information indicating a level of the pre-determined increase in error-correcting coding.

12.   A method for sending a transmission from a wireless device, the method comprising:

detecting that a recipient device is outside of a transmission range of the wireless device;

encoding digital data to be transmitted using enhanced error-correcting coding beyond a standard level of error-correcting coding;

notifying the recipient device that following data will contain enhanced error-correcting coding, said notifying comprising reserving an access code portion of the transmission for the notification of enhanced error-correcting coding; and

sending the encoded digital data.

13.   The method of claim 12, said detecting whether a recipient device is outside of a transmission range of the wireless device further comprising:

failing to detect a reply transmission from the recipient device.

14.   The method of claim 12, said detecting that a recipient device is outside of a transmission range of the wireless device further comprising:

detecting a drop in signal strength in a reply transmission from the recipient device as the recipient device and the wireless device move relative to one another.

15.   The method of claim 12, said encoding data to be transmitted using enhanced error-correcting coding beyond a standard level of error-correcting coding further comprising:

re-encoding previously-sent data using the enhanced error-correcting coding.

16.   (Cancelled)

17.   The method of claim 12, wherein the access code portion is a dedicated inquiry access code portion.

18.   The method of claim 17, said notifying the recipient device that following data will contain enhanced error-correcting coding further comprising:

prefixing the re-encoded previously-sent data with the reserved dedicated inquiry access code portion.

19.   The method of claim 12, said detecting that a recipient device is outside of a transmission range of the wireless device further comprising:

searching for a third wireless device that is available to serve as a forwarding device for forwarding the transmission from the wireless device to the recipient wireless device.

20.   The method of claim 12, further comprising:

searching for a second device operable to continue receiving communications from the recipient device; and

transferring communications from the recipient device to the second device.

21.   An article of manufacture, which comprises a computer readable medium having stored therein a computer program carrying out a method for sending a transmission from a wireless device, the computer program comprising:

a first code segment for encoding, in response to an indication that a recipient device has been detected to be outside of a transmission range of the wireless device, a message using enhanced error-correcting coding beyond a predefined standard level of encoding, to thereby effectively increase the transmission range of the wireless device; and

a second code segment for generating a notification for transmission to the recipient device that the message will contain enhanced error-correcting coding,

wherein the message is a data packet comprising an access code portion, a header portion and a payload portion, and

wherein a dedicated inquiry access code portion is appended to a beginning portion of the access code portion.

22.   (Cancelled)

23.   (Cancelled)

24.   The article of manufacture of claim 21, wherein the dedicated inquiry access code portion contains the notification generated by the second code segment.

25.   The article of manufacture of claim 24, wherein a user of the wireless device is notified of a use of the first and second code segments during their operation.

26.   The article of manufacture of claim 21, wherein the wireless device, including the first and second code segments, operate according to the Bluetooth specification.

27.   A method for extending a transmission range of a wireless device, the method comprising:

encoding data using a first error correction code when the wireless device is within a first transmission range of a recipient device;

detecting that the wireless device is outside said first transmission range; and

encoding messages using a second error correction code when the wireless device is outside said first transmission range,

wherein a dedicated inquiry access code portion of transmitted data is reserved to identify the recipient device and notify the recipient device of the second error correction code when it is utilized by the wireless device.

28. The method of claim 27, wherein said second error correction code provides greater error correction capacity than said first error correction code.

29. The method of claim 27, wherein the wireless device implements the Bluetooth specification.

30. A wireless communications system, comprising:

a first wireless device having a first transmission range and a first error-correcting coding means; and

a second wireless device having a second transmission range,

wherein, when the first wireless device moves outside of the first transmission range relative to the second wireless device, the first error-correcting coding means increases the first transmission range by increasing the level of error-correcting coding applied to transmissions sent from the first wireless device to the second wireless device,

wherein a dedicated inquiry access code portion of transmitted data is reserved to identify the second wireless device and notify the second wireless device of the second error correction code when it is utilized by the first wireless device.

31. The wireless communications system of claim 30, wherein at least some transmissions within the system are sent and received according to the Bluetooth specification.

32. The wireless communications system of claim 31, wherein a user of the first wireless device is notified of the increased level of error-correcting coding, whereby

the user may choose to end the transmission using the increased level of error-correcting coding or move back into the first transmission range.

33.   The wireless communications system of claim 31, wherein the wireless communications device and the second wireless communications device are part of a wireless network of communications devices, at least some of which are portable, and further wherein the increased effective transmission range is temporarily utilized when the wireless communications device exceeds the first transmission range, in order to maintain contact between the two wireless communications devices until one of the remaining network devices can begin to forward data between the two wireless communication devices.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.